MOTHS OF MESPOTAMIA AND N. W. PERSIA.

BY

VARIOUS AUTHORS.

Note.—Throughout this series of papers the following abbreviations are used

for the collectors' names and initials:—

B. T.—Major R. Brewitt-Taylor, R.A.M.C.; P. A. B.—Capt. P. A. Buxton, R.A.M.C.; Br.—Major T. D. Broughton, R.E.; C.—Lt.-Col. F. P. Connor: W. E. E.—Capt. W. E. Evans, R.A.M.C.; L. H.—Capt. L. Harrison; H. D. P.— Lt.-Col. H. D. Peile, I.M.S.

[The specimens taken by Col. Connor and Major Broughton are in the B. N. H. S. Museum. No map is published, because all the localities mentioned will be found on the maps which accompany Major R. E. Cheesman's paper on the Mammalia of Mesopotamia and Dr. P. A. Buxton's paper on the Birds of N. W. Persia

PART I.

NOCTUIDÆ, LEMONIIDÆ AND PYRALIDÆ.

LORD ROTHSCHILD, F.R.S.

I have been asked to contribute the portion dealing with the above 3 families to this list of Mesopotamian and Western Persian Lepidoptera. As in the other portions of the paper the captors' names are indicated by initials.

The nature of the lepidopterous fauna as indicated by the insects of the above 3 groups is decidedly Central Asian in character, though appertaining to the general desert fauna. As was to be expected, however, a few purely tropical forms are present. These are specially the 2 Noctuids Erebus macrops, Linn and Hylodes caranea; Guen. All the types except that of Lemonia peilei are in the Tring Museum.

NOCTUIDÆ.

Agrotin α .

1. Chloridea peltigera, Schiff.

3, Mirjana, Dyala River, November, 1 Jebel Hamrin, June 1918, H. D. P.; 1 d, Amara, Mesopotamia, July 1916, B. T.: 1, Amara, May 1918, P. A. B.

Chloridea nubigera, Herr.—Sch.

l, Amara, Mesopotamia, November 1918, P. A. B.; 1, Mirjana, Dyala River, June 1918, H. D. P.

3. Euxoa lata golickei, Ersch.

l 3, Amara, Mesopotamia, November 1918, P. A. B.; 1 ♀, Mirjana, Dyala

River, October 1918, H. D. P.

Sir George Hampson and many other writers have erroneously placed lata, Treits and golickei, Ersch, as varieties of crassa, Hbn., but the much longer and differently arranged pectinations of the antennæ of the two latter forms at once separate them from crassa. The 3 forms hitherto united under crassa must therefore stand as Euxoa crassa. Hbn.; Euxoa lata lata, Treibs. and Euxoa lata golickei, Ersch.

4. Euxoa lasserrei, Oberth.

1 &, Khaniqin, Mesopotamia, November 1918, P. A. B.

Euxoa messaonda matritensis, Vasq.

1 ♀, Baiji, River Tigris, November 1919, H. D. P. 6. Euxoa segetum, Schiff.

1 ♀, Mirjana, Mesopotamia, December 1918, H. D. P.

7. Euxoa spinifera. Hübn.

2 ♂♂, 1♀, Amara, Mesopotamia, May-August 1918, P. A. B.; 5— Amara, August 1916, B. T.; 1 2, Kut, April 1918, Br.

7a. Euxoa cognita, Shdgr.

1 ♀, Qazvin, September 1919, P. A. B. 7b. Euxoa mustelina terminalis, Subsp. nov.

3 Distinguished from m. mustelina and m. centralis by the dark almost black subterminal area of the forewings.

Habitat.—Qazvin, September 1919, 1 &, P. A. B.

8. Euxoa conspicua, Hbn.

1 d, Enzeli, Caspian, N. W. Persia, June 1919, P. A. B.

Agrotis ipsilon, Hufn.

1, Amara, Mesopotamia, September 1916, B. T.; 1 d, Kut, May 1918, Br.

10. Agrotis comes, Hbn.
1 \(\rangle \), Enzeli, Caspian (Gilan), N. W. Persia, June 1919, P. A. B.

11. Agrotis pronuba, Linn.

3, Qizil Robat, Mesopotamia, March-April 1918, H. D. P.

12. Lycophotia margaritosa, Haw.

1 d, Resht, N. W. Persia, February 1919, P. A. B.

Hadeninæ.

13. Discestra arenaria, Hmpsn.

1 &, Amara, Mesopotamia, May 1918, P. A. B.

14. Scotogramma tripolii, Roth.

2. Amara, Mesopotamia, September 1916, B. T.

14a. Scotogramma chimæra, Rothock. 1 Q, Baghdad, October 1917, P. A. B. (2nd known specimen.)

15. Cardepia taylori, sp. nov.

d, similar to irrisor, Ersch., but larger and darker.

Antennæ brown; head and thorax greyish wood brown, not pale mouse grey abdomen wood grey, not buffish wood grey. Forewing dark brown grey, strongly variegated with blue-grey and cinnamon brown. Orbicular much larger than in irrisor, reniform more sharply defined and stained with black on lower portion, claviform very large and intense brown black; submarginal line much deeper dentate and angulate; fringe brown, not white, and with a row of large dark brown patches. Hindwing basal ½ less white, outer half sooty black; fringe white. Length of forewing 18mm. Expanse 41 mm. 1 d, Amara, Mesopotamia, October 1916, B. T.

16. Sideridis vitellina, Hübn.1 ♀, Baku, Caspian, May 1919, P. A. B.

17. Cirphis loreyi, Dup.

1 & , 1 & , Amara, May-July 1918 ; 1 & , Kumait, River Tigris, November 1917, P. A. B.; Amara May-August 1916, B. T.; 2 & \Diamond , Kut, May 1918, Br. and B. N. H. S.

18. Cirphis zeæ indistincta, Christ.

1 ♀, Basra, August; 1 ♂, Amara, October 1918, P. A. B.; 2, Amara, August 1916, B. T.

19. Cirphis corrugata, Hmpsn.

1 ♀, Amara, July 1918, P. A. B.; I, Amara, July 1916, B. T.

Cucullianæ.

20. Cucullia tanaceti, Schiff. and Den.

1 ♀, Enzeli, Caspian, June 1919, P. A. B.

21. Cleophana bætica diluta, Rothsch.

3 d, Mirjana, Dyala River, February 1919, H. D. P.

22. Metopoceras omar caspica, Alph.

1 d, Amara. April 1918, P. A. B.

Zenobünæ (Achronyctinæ, Auct.)

23. Cranioptora pontica, Stdgr.

1 2, Qazvin 4,000 feet, July 1919, P. A. B.

24. Prodenia litura, Fabr.

2d d, Amara, November 1917 and June 1918; 1d, Basra, August 1918, 1 2, Qurnah, May 1918, P. A. B.; 4, Basra, May-June; 4, Amara, August 1916, B. T.

25. Spodoptera abyssinia, Guen.

1, Basra, May 16; Amara, June-September 1916. B. T.; 1 2 Basra, August 1918, P. A. B.

26. Laphygma exigua, Hübn.

1 ♂, 8 ♀ ♀, Amara, May-September; 1 ♂, 2 ♀♀, Qurnah, May 1918, P. A. B.; 5, Amara, August 1916, B. T.

27. Athetis clavipalpis, Scop.

1 Q Kumait, November 1917, B. A. B.

28. Athetis pertinax, Stdgr.

1 d, Amara, April 1918, P. A. B.

29. Catamecia buxtoni, sp. nov.

of Q closely allied to deceptrix, Stdgr., but at once distinguished by the postmedian band of forewing being much less strongly and not so evenly curved, also this band is not so strongly nor so regularly dentate as in deceptrix. The black streak from the base of forewing is much stronger and more bent than in deceptrix and the reniform is larger and has on its basal side a large dark patch and a similar one is basal of the orbicular which patches are absent in deceptrix; the subterminal band very sharp and angulated on and above vein 4. Hindwings white but not so pure as in deceptrix being irregularly tinged with grey.

Length of forewing: 19mm. Expanse: 42mm. Habitat—2 & d, 1♀, Ali ash Shargi, November 1917 (& Type), 1d, 4 ♀♀,

Kumait, November 1917, P. A. B.

30. Catamecia minima bacheri, Stdgr. 1 ♀, Amara, June 1918, P. A. B.

Erastrianæ.

31. Eublemma parva, Hübn.

1 d, 5 ♀♀, Amara, May—October 1918, P. A. B.

32. Eublemma uniformis, Stdgr.

3 ♀♀, 1 ♂, Qazvin, July 1919, P. A. B.

32a. Erastria trabealis algira, Oberth.
1, Amara, August 1916, B. T. (ab. flavoniteus, Aust.); 1 ♂, 6♀♀, Amara April-September 1918; 1, Qazvin, July 1919, P. A. B. (2 ab. deleta, Stdgr.)

Among the 5 t. algira there is only one quite typical, the remaining 4 are intermediate between t. algira and typical trabealis in the amount of black on the forewings.

Tarache lucida lugens, Alph. 33.

1 d, 1 Q, Menjil, N. W. Persia, March 1919, P. A. B.; 1 d, Baghdad, November 1917, L. H. (B. N. H. S.); 7, Kizil Robat, February-May; 1, Baiji, River Tigris, November 1919, H. D. P.

Westermanniinæ, Acoutnæii, Auct.

Earias chlorophyllana, Standgr.

2 9 9, Enzeli, Caspian, April 1919, P. A. B.

35. Arcyophora dentula, Led.

14, Amara, July-October 1916, B. T.

Catocalinæ.

35a. Mormonia mesopotamica, Kusn.

1, Karind, July 1, Kermanshah, August 1918, H. D. P. 36. Mormonia neonympha, Esp.

1, Basra, May 1916, B. T.; 1, Dyala River, June 1918; 4, Jebel Hamrin, June 1919, H. D. P.; 2 of of, 1 Q, Kut, May-June 1918, Br. (B. N. H. S.); 1 of, Qazvin, N. W. Persia, August 1919, P. A. B.

37. Catocala elocata locata, Stdgr.

1 o, Qazvin, N. W. Persia, July 1919, P. A. B.; 1, Jebel Hamrin, June 1918, H. D. P.; Kermanshah, August 1918, H. D. P.

38. Catocala puerpera pallida, Alph.

1 o, Kermanshah, September 1918, Br. (B. N. H. S.)

39. Erebus macrops, Linn.

1 2, Off coast of Persia, November 1917, Captain Simmonds.

40. Homæa arefacta, Swinh.

19, Amara, September 1918, P. A. B.; 20, Amara, July-October 1916, B. T.

Parallelia algira, Linn.

1, Basra, June, 7; Amara, August 1916, B. T.

d. Grammodes geometrica, Fabr. 1, Amara, October 1916, B. T.

Chalciope hyppasia, Cram. 4, Amara, August-October 1916, B. T.

Leucanitis picta, Christ.

1 ♀, Menjil, March 1919, P. A. B.

Clytie arenosa, Rothsch.

1 9, Amara, August 1916, B. T.; 1 9, Kut, June 1918, Br. (B. N. H. S.).

46. Pericyma albidentaria, Frr.

1 d, Baghdad, October 1917, 2 d d, Amara, June 1918; 1 Q, Kut, August 1918, P. A. B.; 3, Basra, June; 22, Amara, July-August 1916, B. T.

47. Pericyma squalens, Led.
3 ♀ ♀, Amara, April, June, July 1918, P. A. B.; 34, Amara, August 1916,

B. T.

48. Contyta profesta (Christ.)

25, Amara, August 1916, B.T.; 1, Dyala River, June 1918, H. D. P.; 1, Kut, May 1918, Br. (B. N. H. S).; $2 \circlearrowleft 3$, $6 \circlearrowleft 2$, Amara, June-September; $2 \circlearrowleft 3$, $3 \circlearrowleft 2$, Kut, August 1918, P. A. B.; 1, Jebel Hamrin, June 1919, H. D P.

Phylometrinæ (Plusiinæ, Auct.)

49. Syngrapha circumflexa (Linn.) 1, Mirjana, February; 1, Kizil Robat, April 1919, H. D. P.; 2 of, Amara, May 1918, P. A. B.; 1 \circ , Kut, May 1918, Br. (B. N. H. S.).

50. Phylometra ni, Hübn.

1 d, Amara, May 1918, P. A. B.; 2, Amara, August 1916, B.-T. These specimens are very dark.

51. Phylometra daubei, Boisd.

1 d, Basra, August 1918, P. A. B.

Phylometra chalcites, Borkh.

1, Mirjana, February 1919, H. D. P.; 2, Amara, August 1916, B. T.

53. Phylometra gamma, Linn.

8 Mirjana, January-February 1919, H. D. P.

Noctuinæ.

54. Tarachephia hueberi, Ersch.

2 ♀ ♀, Amara, May 1918, P. A. B.

55. Hylodes caranea, Guen.

19, Probably Karmanshah, Br. (B. N. H. S.)

56. Pandesma anysa, Guen.

333, Kut, May 1918 1, Br. (B. N. H. S.); 13, 12, Amara, May-June 1918; 1 d, Qazvin, August 1919, P. A. B.

56a. Apopestes spectrum innotata, Warr.

7, Kermanshah, August 1918; 1, Kirkuk, September 1919, H. D. P.; 1 3, Qazvin, July 1919, P. A. B.

57. Autophyla gracilis, Stdgr. 1 2, Menjil, March 1919, P. A. B.

Rivula sericealis, Scop.

4 ♂ ♂, 3♀♀, Amara, October 1917-September 1918, P. A. B.; 1♀, Amara, September 1916, B.-T. This series is very variable.

Polypogoninæ (Hypeninæ, Auct.)

59. Rhynchina eremialis, Swinh.

1d, 299, Amara, September-October 1918, P. A. B.; 1d, Amara, September 1916, B.-T.

60. Rhynchina ravalis syniocalis, Stdgr.

August-October 1916, B.-T.

LEMONIIDÆ.

61. Lemonia peilei, sp. nov.

Allied to pia, Püngl., but larger and the wings longer and narrower. Antennæ rufous chocolate; head, thorax, and abdomen dark testaceous buff. Forewing with apex strongly produced and pointed, costal edge deeply concave, costa and terminal edge bright yellowish buff, rest of wing pale cinnamon chocolate, a dark brown spot in cell ringed with buff, a submarginal band slightly convex and toothed basad primrose yellow. Hindwing cinnamon chocolate, a postmedian band, termen and fringe yellow.

Habitat—2 o, Mirjana, Dyala River, December 1918, H. D. P.

62. Lemonia pia, Püngl.

1d, Qazvin. October 1919, P. A. B.

Pyralidæ.

Galleriince.

63. Arenipses sabella, Hmpsn.

2 ♂ ♂, 3 ♀ ♀, Amara, April-June 1918, P. A. B.; 1 ♀, August 1916, B.-T. 64. Archigalleria buxtoni, sp. nov.

o, very much smaller than the Q, forewings very short and at termen very

square, giving the insect much the appearance of a Hepialus. Antenne grey brown; palpi, head and thorax pale grey mixed with mauve brown; abdomen dark brown grey.

Forewing pale grey powdered with brown scales; a partially broken black patch below median in basal $\frac{2}{3}$ ths of wing, outer $\frac{3}{5}$ ths of wing below subcostal area with strong cloud-like oil brown markings occupying almost the whole disc of the wing, a post discal whitish dentate band beyond which are black dots; a marginal line of black dots; a black brown patch followed by a white one with black brown spots in it below subcostal, fringe pale grey with chain of brown spots. Hindwing basal \(\frac{1}{3}\) whitish passing gradually into the sooty black brown of remainder of wing, fringe greyish white.

Q. Antennæ greyish white annulated with brown; head, thorax and abdomen grey slightly sprinkled with brown. Forewing similar to 3 but much paler and dark spots and markings smaller. Hindwing semivitreous white, with

brown grey terminal hairline. One specimen of the 5 has all light parts of forewings sandy buff as well as head, thorax and abdomen and 2 others have all these parts suffused with brown.

Length of forewing: \emptyset , 13 mm., \mathbb{Q} , 19 mm. Expanse: \emptyset , 29 mm., \mathbb{Q} 42 mm. Habitat—3 \emptyset \emptyset , 5 \mathbb{Q} \mathbb{Q} , Amara, June 1918. P. A. B.

65. Lamoria anella, Schiff.

2 dd, Enzeli, May-June 1919, P. A. B.

Crambinæ.

66. Ommatopteryx ramburella, Dup.

5 ♂♂, 3 ♀♀, Amara. May 1917-June 1918; 1 ♀ Baghdad, September 1917; 1♀, Enzeli, June 1919, P. A. B.

67. Ommatopteryx ocellea, Haw.

1 ♂, 1 ♀, Amara, June 1918, P. A. B.

68. Chilo phragmitellus, Hübn. 1 &, Enzeli, June 1919, P. A. B. 69. Chilo suppressalis, Walk.

1 Q, Amara, April 1918, P. A. B. 70. Ancylolomia affinis, sp. nov.

o, Nearest to palpella, Schiff., but at once distinguishable by the entire absence of the silver bands on the median nervure and eosto-subcostal area.

Palpi, head and thorox sandy buff; antennæ strongly peetinated, shaft white peetinatious brown black; abdomen whitish buff with broad brown bandlike markings, aval tuft white. Forewing sandy buff with intraneural brown bands which are dotted sparsely with minute black and silver dots; a broad silver streak from discocellulars to submarginal band which is brown and strongly dentate on both sides, wing from submarginal band to termen whitish with 2 brown lines, terminal line metallie. Hindwing pale brownish grey with darker terminal line; fringe white.

2. Antennæ filiform brown; head and thorax pale buff; abdomen bush segment glistening white, rest pale buff. Forewing yellowish buff. Hindwing

white.

Length of forewing: ♂ 20 mm., ♀ 24 mm.

Expanse: 3, 43 mm., 2, 52 mm.

Habitat—1 ♂, Amara, November 1917 : 1 ♀, Qazvin, September 1919, P. A. B.

Siginæ (Schænobiinæ, Auet.).

71. Scirpophaga prælata, Seop. 1 2, Enzeli, June 1919, P. A. B. 72. Schænobius incertellus, Walk.

1 &, 5 ♀ ♀, Amara, June-July 1918; 1 ♀, Qurnah, May 1918, P. A. B.: 1 ♂,

I have not used the genus Topentis for prulata as Sir George Hampson has done because, although included in Topentis by Hübner; the genus Topentis was restricted by Stephens in 1829 as=Chilo, Zincken and therefore prælata, Scop.= phantasmella, Hbn, is excluded, the 4 species Stephens restricts Chilo=Topentis to, not including it.

Hypsotropinæ (Anerastiinæ, Auct.).

Raphimetopus ablutella, Zell.

1 ♀, Baghdad, October 1917; 1 ♀, Qazvin, July 1919, P. A. B.

Saluria maculivitella, Rag.

1 ♂, Baghdad, October 1917: 1 ♂, 3 ♀♀. Amara, October 1917 and June 1918, P. A. B.

75. Saluria pulverosa, Hmpsn.

3 3 3 , 2 \mathfrak{D} , Baghdad. October 1917 : 2 \mathfrak{D} . Azizieh, October 1917; 1 \mathfrak{F} , 4 ♀♀, Amara, October 1917—May 1918, P. A. B.

Anerastiinæ (Phycitinæ, Auct.).

76. Ephestia cautella, Walk.

1 $\$, Basra, September 1918 ; 1 $\$, Amara, April 1918 ; 1 $\$, Enzeli, May 1919, P. A. B.

77. Ephestia elutella, Hübn.

1 Q, Amara, April 1918, P. A. B. 77a. Ephestia inductella, Stdgr.

2 of of, Enzeli, June 1919, P. A. B.

78. Ephestia calidella, Guen.

19, Baghdad, September 1917; 3 of of, Amara, June-September 1918, P. A. B

79. Spermotophora hornigii, Led.

Larva found in August feeding on windfall Dates.

80. Heterographis hellenica. Stdg.

3 ♂♂, 2♀♀, Amara, April-September 1918, P. A. B.

81. Heterographis subcandidatella, Rag.

7 ♂ ♂, 3 ♀ ♀, Amara, May-July 1918, P. A. B.

82. Heterographis convexella, Led. 1 Q, Amara, June 1918, P. A. B.

83. Heterographis fulvobasella, Rag.

1 Q, Amara, June 1918, P. A. B.

84. Heterographis monostictella, Rag. 1 &, Amara, September 1918, P. A. B.

85. Heterographis microshictella, Hmpsn.

1 Q, Amara, June 1918, P. A. B.

86. Heterographis pallida, Stdgr.
1 ♂, 1 ♀, Qazvin, July-August 1919, P. A. B.

87. Heterographis buxtoni, sp. nov.

Q. Antennæ brownish cream; head, thorax and abdomen cream colour. Forewings cream colour. Hindwings silvery white.

Length of forewings: 10 mm. Expanse: 22 mm.

Habitat—1 ♀, Baghdad, October 1917, P. A. B.

87a. Heterographis deserticola, Stdgr. 1 &, Qazvin, September 1919, P. A. B.

88. Psorosa nucleolella, Mæschl.

1 d, 1 ♀, Amara, June October 1918, P. A. B.

89. Lasiosticha hieroglyphiella, Rag.

1 d, Qazvin, July 1919; 1 d, Amara, June 1918, P. A. B.

90. Aphyteles ochreella, Rag.

299, Amara, September 1918; 1♂, September 1919, P. A. B.

90a. Melanastia cerraticornella, Zell.

1 \, Amara, September 1918, P. A. B.

91. Salebria acervella, Eusch.

19, Baghdad, September 1917, P. A. B.

91a. Laodamia fusca postalbidior, subsp. nov.

Differs from f. infausta, Rag., in the much whiter hindwings.

Habitat—1 &, 1♀, Amara, April 1918, P. A. B.

92. Auxacia bilineela, Rag.

4 d d, 6 Q Q, Amara, June-September 1918, P. A. B.

93. Tlithyia semirubella, Scop.

1 d. 19, Amara, April-September 1918; 19, Enzeli, June 1919, P. A. B.

94. Tlithyia buxtoni, sp. nov.

Antennæ grey; head and thorax silvery slate grey; abdomen slate grey. Forewing slate grey, an oblique antemedian white band and 2 subterminal white lines, disc between oblique band and basal subterminal line except on costa and in cell variegated with greyish white. Hindwing silvery grey, whiter towards base, fringe white.

Length of forewing; 11 mm. Expanse: 24 mm. Habitat—1 ♀, Menjil, March 1919, P. A. B.

95. Zophodia suberastriella, sp. nov.

Q closely allied to erastriella, Rag., but much greyer, less rufous.

Differs principally in having the curved oblique black antemedian line stopping short in cell and the postmedian line more sinuate and more strongly angled.

Length of forewing: 9 mm. Expanse: 20 mm. Habitat—Enzeli, Caspian, June 1919, 1♀, P. A. B.

95a. Eurhodope buxtoni, sp. nov.

d Nearest to monogrammos, Zell, but smaller and without metallic fringe and submarginal line. Uniform mouse grey; fringe of forewing and marginal lines of both wings darker.

Habitat—1 ♂, Amara, June 1918, P. A. B. Length of forewing: 8 mm. Expanse: 18 mm.

Pyralinæ.

96. Bostra marginalis, sp. nov.

Antennæ black partially ringed with white; head and thorax blackish purple brown, slightly sprinkled with clay colour; abdomen purple brown,

sprinkled with yellowish wood brown.

Forewing sooty brown black, a pale antemedian angled band, a row of pale spots along costa, a black stigmatic patch at end of cell, a sinuate strongly dentate greyish buff postmedian line, termino-subterminal area beyond this line yellowish wood grey with a smoky line and terminal row of black dots in it. Hindwings silky wood brown paler on basal half, an indistinct yellowish median band, fringe yellowish grey, terminal line brown. Length of forewing: 10-13 mm. Expanse: 22-28 mm.

Habitat—Amara, 1♀, November 1918, P. A. B.; 2♀♀, August-Septem. ber 1916, B.-T. (Type).

97. Dattinia argentalis, Hmpsn.

6♀♀, Amara, September 1918, P. A. B.

98. Dattinia canifusalis, Hmpsn.

1 d, 1 2, Amara, May 1918, P. A. B.; 1 d, Kizil Robat, March 1919, H. D. P.

Dattinia simplicialis, sp. nov.

Antennæ, head, thorax and abdomen chalk white. Forewing chalk white, a patch running in from apex to end of cell, a spot at end of cell, terminal line, and outer 2/3 of inner margin very pale buff. Hindwing silky white with pale buff terminal line.

Length of forewing: 12 mm. Expanse: 27 mm.

Habitat-Amara, June 1918, 19, P. A. B.

There is a ? of the species mixed up with leonalis, Oberth, in the British Museum from Elkantara, Algeria.

100. Dattinia affinis, sp. nov.

Q Nearest to poliopastalis, Hmpsn., in pattern, but with shorter rounder wings more like vulgaris, Butl.

Differs from poliopastalis in lacking all blue-grey tints, in having a snow white not buff first abdominal segment, in the antemedian band of forewings being much broader and straight not angled in the white markings of forewings being much closer together, and in the quadrate brown terminal markings not row of terminal black spots.

Length of forewing: 10 mm. Expanse: 22 mm.

Habitat—Kut, August 1918, 1 ?, P. A. B.

101. Botys armenialis, Led.

13, Azizieh, October 1917; 1 \mathfrak{P} , Baghdad, October 1917; $\mathfrak{S}\mathfrak{P}$, Amara September-October 1918, P. A. B.

Nymphulinæ.

Nymphula nymphæata latifaseata, subsp. nov.

2 Differs from n. nymphæata in the bands of the hindwings being much broader, less irregular and less excised. The colour of the dark markings in this specimen is also much darker.

Habitat—Enzeli, June 1919, 19, P. A. B.

Staudinger already remarked that Syrian specimens were different.

103. Nymphula nigrolinealis sordidior, subsp. nov.

d Differs from n. nigrolinealis, Pryer, in the yellow being duller and the yellow marginal band on hindwings less even.

Habitat—Enzeli, June 1918, 1 d, P. A. B.

104. Nymphula affinialis, Gnen.

4 ♂ ♂, 7 ♀ ♀, Amara, April-June 1918, P. A B.

Agroterinæ.

105. Sylepta ruralis, Scop.

1 d, 3 Q Q, Enzeli, May-June 1919, P. A. B.

105a. Ercta ornotalis, Dup.

19, Amara, October 1917, P. A. B.

106. Hellula undalis, Fabr.

13, Enzeli, May 1919; 19, Qazvin, August 1919, P. A. B.

107. Nomophila noctuella, Schiff.
1 ♂, Enzeli, May 1219 . 1 ♂, Baghdad, October 1917; 1 ♀, Amara, April 1918, P. A. B.; 1, Kizil Robat, February 1919; 1 Baiji, March 1920, H. D. P. 107a. Psara pallidalis, Hmpsn.

1 o, Enzeli, May 1919, P. A. B.

- 108. Lonostege sulphuralis, Hub. 1 d, Enzeli, June 1919, P. A. B.
- Loxostege palealis anaxisalis, Walk. 1 d, Persian Talysh, July 1919, P. A. B.

110. Loxostege sticticalis, Linn.

1 d, 1 ♀, Persian Talysh, July 1919, P. A. B.

111. Uresphiba polygonalis, Hübn.

1♀, Amara, Septem' er, 1916, B.-T.

111a. Cybolomia pentadalis, Led.

2 ♂ ♂, Amara, June-September 1918, P. A. B.

Metasia ochrifascialis, Christ. 1♀, Kut, August 1918, P. A. B. Metasia ossealis, Stdgr.

2 ♀ ♀, Amara, June 1918, P. A. B.

Pyrausta aurata, Scop.

1♀, Enzeli, June 1919, P. A. B. 114. Pyrausta cespitalis, Schiff.

2 d d, Amara, March-April 1918, P. A. B.

Tegostoma baphialis, Stdgr.

3 d d, 2 \heartsuit , Amara, April-September 1918 ; 1 \heartsuit , Qazvin, July 1919, P. A., B.; 2 d d, 1 \heartsuit , Amara, July-August 1916, B.-T.

Tegostoma paralis, Hmpsn.

12, Baghdad, September 1917; 1 d, Qazvin, July 1919, P. A. B.

117. Noctuelia floralis, Hübn.

2♀♀, Amara, May-September 1918; 1 ø, 2♀♀, Baghdad, September 1917;

1♀, Qazvin, July 1919, 1♀, Menjil, March 1919, P. A. B.

As the nomenclature employed may be strange to some of the readers of this journal I give below the 1st quotation of the name of each species:—

1. Noctua peltigera, Schiffermuller and Denis; Aukünd. Syst. Werk. Schmett.

Wier. Geg., p. 89, Class W. No. 1. (1775) (Vienna).

2. Heliothis nubigera, Herrich-Schiiffer, Syst. Bearb. Schmett. Eur., Vol. II., p. 366 (1845) (Asia Minor).

3. Agrotis golickei, Erschoff, Hor. Entom. Ross, Vol. VIII., p. 316 (1871) (Turkestan).

4. Luperina lasserrei, Oberthur, Etud. Entom. Fasc. VI., p. 86, pl. 11, ff. 13, 14 (1881) (Magerta, Algeria).

 Heliophobus matritensis, Vasquez, Bol. Espan. Hist. Nat., 1905, p. 116, f. 1 Madrid).

6. Noctua segetum, Schiffermuller and Denis, Aukünd. Syst. Werk. Schme't Wier Geg., pp. 81, No. 12, 252, pl. 1, ff. 3a, b (1775) (Vienna).

Noctua spinifera, Hiibner, Samm. Europ. Schmett. Noct., f. 389 (1808) (Europe).
 Agrotis cognita, Standinger, Stett. Entom. Zeit., 1881, p. 417 (Ala Tau).

8. Noctua conspicua, Hiibner, Samml. Europ. Schmett. Noct., ff. 718-719 (1830)

(Europe).

9. Phalaena, ipsilon, Hufuagel, Berl. Mag., Vol. III, p. 416, No. 99 (1766 (Berlin)=Noctua suffusa, Schiffermüller and Denis, Aukünd Syst. Werk. Schmett. Wier. Geg., p. 80, No. 4 (1775) (Vienna.)=Noctua Ypsilon, Rottenburg, Naturf.,

Vol. IX. p. 141 No. 99 (1776) (Berlin).

In Vol. 4 of the British Museum Catalogue of Lepidoptera Phalænae Sir George Hampson has used Rottenburg's name of Ypsilon for this insect. He did this on the assumption that the "Wiener Verzeichuiss" appeared in 1776 in which case the Vol. IX of the "Naturforscher" has some weeks priority; but the "Wiener Verzeichuiss" like so many of the older works was first put on the market in a few copies in 1775 under the title Ankundigungerves, &c., as an experiment, and when it was found successful, the remainder of the edition was issued in and dated 1776; therefore all names given in this work must date from 1775. Thus suffusa, Schiff, would, at first sight, appear to be the correct name by priority; but it is not so. Apparently Sir George Hampson has not thoroughly studied Rottenburg and Hufnagel's lists, but has relied too implicitly on Staudinger's "Catalogue." The fact is that Rottenburg's list is merely a critical survey of Hufnagel's work and in nearly every case Rottenburg's names published in 1776 must be quoted as being of Hufnagel, 1766, this latter author having 10 years priority.

10. Noctua comes, Hühner, Samml. Europ. Schmett., f. 521 (1818) (Europe) = Noctua comes, Treitschke, Schmett. Eur., Vol. V., part I., p. 254, No. 2 (1825)

(Europe).

In Vol. 4 of the British Museum Catalogue Sır George Hampson gives priority to Treitschke (1825) as author of the name *comes* over Hübner. This he does because nearly all through his various lepidopterological books and articles, he has taken 1827 as the date both of Hübner's "Sammlung Europäischer Schmetterlinge" and of his "Verzeichniss bekannter Schmettlinge" whereas the date of the first part of the first edition of the "Sammlung" is 1796 and of the 2nd edition, 1805 and parts of the "Verzeichniss" appeared from 1816 to 1826.

11. Phalana pronuba, Linnæus, Syst. Nat., Edit. X., p. 512, No. 87 (1758)

(Sweden).

12. Noctua margaritosa, Haworth, Lepid. Brit., p. 18, No. 156 (1809) (Great Britain).

13. Discestra arenaria, Hampson, Cat. Lepid. Phal. Brit. Mus., Vol. V., p. 16, No. 1139, pl. LXXVIII, f. 25 (1905) (Sind).

14. Phalana trifolii, Hufnagel, Berl. Mag., Vol. III., part IV., p. 398, No. 70 (1766) (Berlin)=Noctua trifolü, Rottenburg, Naturf, Vol. IX, p. 131, No. 70 (1776) (Berlin).

Here again Sir George Hampson in Vol. 5 of the British Museum Catalogue follows Staudinger and gives Rottenburg as author of the above name, whereas the 1st author and describer was Hufnagel.

14a. Scotogramma chimaera, Rothschild, Novit. Zool., Vol.

16. Noctua vitellina, Hübner, Samml. Europ. Schmett., ff. 379, 589 (1803) (Europe).

17. Noctua loreyi, Duponchei, Hist. Nat. Lépid France., Vol. VII, part I, p. No. CCCCXXVIII (1827) (Province).

18. Leucania indistincta, Christoph, Rom. Mém Lépid., Vol. III., p. 79, pl. 4,

f. 5 (1887) (Kisil-Arwat).

Leucania corrugata, Hampson, Faun. Brit. India Moths., Vol. II, p. 278, 19. No. 1923 (1894) (Simla).

20. Noctua tanaceti, Schiffermüller and Denis, Ankünd Syst. Werk. Schmett.

Wier. Geg., p. 73, class T., No. 5 (1775) (Vienna).
21. Cleophana boetica diluta, Rothschild, Ann. Mag. Nat. Hist. (8) VIII., p. 232, No. 2 (1911) (Bon Saada).

22. Metopoceras sacra var. caspica, Alpheraky, Tris., Vol. VIII, p. 171 (1895)

(Tekke, Caspian).

23. Acronycta pontica, Staudinger, Hor. Soc. Entom. Ross., Vol. XIV, p. 364 (1879) (Kerasdere).

24. Noctua litura, Fabricius, Syst. Entom. p. 601, No. 50 (1775) (I India

Orientalis).

25. Spodoptera abyssinia, Guenèe, Hist. Nat. Ins. Spec. Gen. Lépid. Vol. V. Noct. I., p. 154, No. 244, (1852) (Abyssinia).

26. Noctua exigna, Hübner, Samml. Europ. Schmett. Noct., f. 362 (1803)

27. Phalæna clavipalpis, Scopoli, Entom. Carn., p. 213, No. 526 (1763) (Carniolia).

Caradrina pertinax, Staudinger, Hor. Soc. Entom Ross., Vol. XIV, p. 387 28. (1879) (Kerasdere).

30. Catamecia jordana var. bacheri, Staudinger, Cat. Lépid. Palaar. Fauneng Edit. III., Part I, p. 213, No. 2192a, 1901 (Dead Sea). 31. Noctua parva, Hübner, Samml. Europ. Schmett., f. 356 (1803) (Europe).

Thalpochares uniformis, Staudinger, Hor. Soc. Entom. Ross., Vol. XIV., p. 414 (1879) (Schahrud, Persia).

Agrophilas sulphuralis var. algira, Oberthur, Etud. Entom., Fasc. VI.,

90 (1881) (Bône).

Acontia lucida var. lugens, Alpheraky, Rom. Mem. Lépid., Vol. V., p. 182, No. 118 (1889) (Babatagh).

34. Eari is chlorophyllana, Staudinger, Tris, Vol. IV., p. 249 (1891) (Mardin). 35. Euxestes dentula, Lederer, Hor. Soc. Entom. Ross., Vol. VI., p. 89., pl. V.,

f. 8. (1870) (Astrabad). 35a. Catocala mesopotamica, Kusnezov, Revue Russe Entom., p. 74, No. 2680.

(1903) (Nomen novum).

36. Noctua neonympha, Esper, Schmett., part IV., Vol. 2, p. 75, 251st sp., pl. CXCVIII., Noct, 49, f. 1, 2 (1796) (Sarepta.)

37. Catocala elocata var. locata, Staudinger, Tris., Vol. IV., p. 327 (1891) (Taschkend, Margelan).

38. Catocala puerpera var. pallida, Alpheraky, Mem. Lépid Roman., Vol. III., p. 406 (1887) (Lob-noor-Ak-Su).

39. Phalæna macrops, Linnæus, Syst. Nat., Edit. XII, Vol. III., p. 225 (1768) (India Orientalis).

40. Remigia arefacta, Swinhoe, Proc. Zool. Soc., Lond., 1884, p. 521, No. 63 (Karachi).

41. Phalæna algira, Linnæus, Syst. Nat., Edit. XII, Vol. I., part II, p. 836,

No. 98 (1767) (Algeria).

42. Noctua geometrica, Fabricius, Syst. Entom., p. 599, No. 37 (1775) (India Orientalis).

43. Phalæna hyppasia, Cramer, Pap. Exot., Vol. III, part XXI., p. 99, pl. CCL, f. E. (1779) (Coast of Coromandel).

44. Leucanitis cailino var. picta, Christoph, Hor. Soc. Entom. Ross., Vol. XII., p. 257, No. 22, pl. 7, f. 28 (1877) (Krasnowodsk).

45. Clytie arenosa, Rothschild. Novit. Zool., Vol. XX., p. 128, No. 69 (1913)

(S. Oned Mya).

46. Acidalia albidentaria, Freyer, Neu. Beitr. Schmetterlingsk., Vol. 4, part

59, p. 115, No. 597, pl. 354, f. 1 (1842) (S. Russia).

- 47. Pericyma squalens, Lederer, Verh. Zool.-bot. Ver. Wien., Vol. V., p. 184, pl. 5, f. 11 (1855) (Cyprus).
- 48. Pericyma profesta, Christoph, Entom. Zeit. Stett., Vol. 48, p. 165 (1887) (Askhabad).
- 49. Phalæna circumflexa, Linnæus, Syst. Nat., Edit. XII, p. 844, No. 128 (1767) (Europe).
 - 50. Noctua ni, Hübner, Samml. Europ. Schmett. Noct., f. 284 (1802) (Europe).

51. Plusia daubei, Boisduval, Gen. et. Ind. Meth. Europ. Lepid., p. 159, No.

1281 (1840) (Spain, Andalusia).

52. Noctua chalcites, Esper, Schmett., Vol. I., part IV, pl. CXLI, Noct. 62, f. 3 (ante 1792); Borhausen, Syst. Beschr. Europ. Schmett. (Naturg. Europ. Schmett.) part 4, p. 774, No. 352 (1792); Esper, Vol. I., part IV., p. 447, spec. 167 (1796-1805) (Central Italy).

53. Phalæna gamma, Linnæus, Syst. Nat., Edit. X., p. 513, No. 91 (1758)

(Sweden).

54. Acontia hueberi, Erschoff, in Fedtschenko Voyage au Turkestan Lepid, p. 49, pl. III., f. 47 (1874) (Desert of Kisil-Kum).

55. Hulodes caranea, Guenèe, Hist. Nat. Ins. Spec. Gen. Lepid., Vol. VII.,

Noct. III., p. 208, No. 1608 (1852) (Yova, Sylhet, &c.).

- 56. Pandesma eanysa, Guenèe, Hist. Nat. Ins. Spec. Gen. Lepid., Vol. VI., Noct. II., p. 439, No. 1311 (1852) (Central India).
- 56a. Apopestes spectrum innotata, Warren, in Seitz Grossschmett. Erde., Vol. 3, p. 370, pl. 68b (1913) (Amaria, Syria).

57. Spintherops gracilis, Standinger, Entom. Zeit. Stett., Vol. 35, p. 95 (1874)

(Krasnosowodsk).

- 58. Phalwna sericealis, Scopoli, Entom. Carn., p. 242, No. 615 (1763) (Carniolia).
- 59. Rhychina eremialis, Swinhoe, Proc. Zool. Soc., Lond., 1889, p. 417 (Hydrabad).
- 60. Hypena ravalis, var. syriacalis, Staudinger, Tris. Vol. IV., p. 335 (1891) (Syria).
- 62. Lemonia pia, Püngler, Tris., Vol. XV., p. 143, No. 2, pl. 6, f. 17 (1902) (Dead Sea).
- 63. Arenipses sabella, Hampson, in Mèm. Lepid. Roman. Vol. VIII., p. 501, No. 93, pl. XXIV., fig. 1 (1901) (Fao).
- 65. Tinea anella, Schiffermüller and Denis, Aukünd Syst. Werk. Schmett. Wier. Geg., p. 135, No. 30 (1775) (Vienna).
- 66. Crambus ramburiellus, Dupouchel, Hist. Nat. Lepid. France, Vol. 10, Coutin, Vol. VII, p. 83, No. MCCCLXXXII., pl. 270, f. 8. (1836) (Ajaccio).
- 67. Palparia ocellea, Haworth, Lepid. Brit., Part III, p. 486, No. 21 (1811) (London).

(68. Tinea phragmitella, Hübner, Samml. Europ. Schmett., ff. 297-298 (1811) (Europe).

69. Crambus suppressalis, Walker, List Spec. Lepid. Ins. Brit. Mus., part

XXVII., p. 166, No. 108 (1863) (Shanghai).

Phalæna prælata, Scopoli, Entom. Carn., p. 198, No. 494 (1763) (Carnialia).
 Chila incertulas, Walker, List Spec. Lepid. Ins. Brit. Mus., part XXVII,
 p. 143, No. 15 (1863) (Sarawak).

Anerastia ablutella, Zeller, Tris. 1839, part III, col. 177, No. 4 (Sicily).
 Saluria maculivittella, Ragonot, Ann. Soc. Entom. France., Vol. LV

(Ser. 6, Vol. 7), p. 258, No. 181 (1887) (Gabes; Mt. Elder; Marghilan).

75. Poujadia pulverosa, Hampson, Faun. Brit. Ind. Moths., Vol. IV., p. 60,

p. 73, No. 27 (1863) (Ceylon).

76. Pempelia cautella, Walker, List Spec. Lepid. Ins. Brit. Mus., part

XXVII, p. No. 4302 (1896) (Sind).

77. Tinea elutella, Hübner, Samml. Europ. Schmett, f. 163 (1796) (Europe). 77a. Ephestia inductella, Staudinger, Hor. Soc. Entom. Ross., Vol. XV., p. 229 (1880) (Amasia).

78. Ephestia calidella, Guenèe, Europ. Microl. Ind. Meth., p. 82 (1845) (Islands

of Hyères).

79. Spermatophora hornigii, Lederer, Verh. Zool. Bot. Ver. Wien., Vol. II., p. 133 (1852) (Vienna).

80. Myelois rhodochrella var. hellenica, Staudinger, Hor. Soc. Entom. Ross., Vol. VII., p. 209, No. 597, pl. II, f. 18 (1871) (Africa).

81. Heterographis subcandidatella, Ragonot, Ann. Soc. Entom. France., Vol. LVI. (Ser. 6, Vol. 7), p. 249, No. 126 (1887) (Marghilan).

82. Myelois convexella. Lederer, Verh. Zool. Bot. Ver. Wien., Vol. V., p. 222,

pl. 4, f. 9 (1855) (Beirut).

83. Heterographis fulvobasella, Ragonot, Ann. Soc. Entom. France., Vol. LVI., (Ser. 6, Vol. 7), p. 248, No. 123 (1887) (Shatrud).

84. Heterographis monostictella, Ragonot, Ann. Soc. Entom. France., Vol. LVI.

(Ser. 6, Vol. 7), p. 249, No. 127 (1887) (Derbent).

85. Heterographis microstictella, Hampson, Journ. Bomb. Nat. Hist. Soc., Vol. XV., p. 23 (1903).

86. Myelois pallida, Staudinger, Berl. Entom. Zeitschr., Vol. 14, p. 202, No. 40 (1870) (Sarepta).

87a. Myelois deserticola, Staudinger, Berl. Entom. Zeitschr., Vol. 14, p. 201,

No. 39 (1870) (Sarepta). 88. Nephopteryx nucleolella, Möschler, Berl. Entom. Zeitschr., Vol. 10, p. 147 (1866) (Sarepta).

89. Pempelia hieroglyphiella, Ragonot, Ann. Soc. Entom. France. Vol. LVI.

(Ser. 6, Vol. 7), p. 244, No. 95 (1887) (Astrabad).

90. Tephris ochreella, Ragonot, in Mèm. Lèpid. Roman., Vol. VII., p. 448, pl. XIII., f. 13 (1893) (Shahrud).

90a. Nephopteryx serraticornella, Zeller. Tris., 1839, part III, col. 179 (1839) (S. Europe).

91. Alispa acervella, Erschoff in Fedtschenko, Voy. au Turk., p. 90, No. 309, pl. V., f. 94 (1874) (Kisil-Kum).

92. Aria bilineella, Ragonot, Ann. Soc. Entom. France, Vol. LVI. (Ser. 6,

Vol. 7), p. 235, No. 50 (1887) (Turkistan).

93. Phalana semirubella, Scopoli, Entom. Carn., p. 245, No. 623 (1763) (Carniolia).

97. Constantia argentalis, Hampson, Trans. Entom. Soc., Lond., 1900, p. 380, No. 6a (Syria).

98. Constantia canifusalis, Hampson, Trans. Entom. Soc., Lond., 1900, p. 381, No. 7b, pl. 111, f. 16 (Algeria, &c.).

Cledeobia armenialis, Lederer, Ann. Soc. Entom. Belg., Vol. 13, p. 51, No. 14, pl. 11, ff. 7, 8 (1869-1870) (Transcaucasia).

104. Nymphula affinialis, Guenèe, Hist. Nat. Ins. Spec. Gen. Lèpid., Vol.

VIII., p. 270, No. 259 (1854) (Central India).

105. Phalana ruralis, Scopoli, Entom. Carn., p. 242, No. 616 (1763) (Carniolia). 105a. Asopia ornatalis, Duponchel, Hist. Nat. Lepid. France, Vol. VIII., pt. II., p. 207, No. MXXX., pl. 223, f. 8 (1831) (France).

106. Phalæna undalis, Fabricius, Entom. Syst., Vol. III., part II., p. 226, No.

362 (1794) (Italy).

107. Tinea noctuella, Schiffermüller and Denis, Ankünd. Syst. Werk. Schmett.

Wier. Geg., p. 136, No. 35 (1775) (Vienna).

107a. Pachyzanclapallidalis, Hampson, Ann. Mag. Nat. Hist. (8) XI., p. 513, No. 18c (1913) (Tenimber). 108. Pyralis sulphuralis, Hübner, Samml. Europ Schmett., ff. 166, 167 (1818)

(Europe).

109. Botys anaxisalis, Walker, List. Lepid. Ins. Brit. Mus., Part XVIII., p. 658, No. 194 (1859) (Shanghai).

110. Phalæna sticticalis, Linnæus, Fauna Suecica, Edit. II., p. 352, No. 1354

(1761) (Sweden).

111. Pyralis polygovalis, Hübner, Samml. Auserl. Vög. and Schmett, p. 76, (1793).

Botys pentadalis, Lederer, Verh. Zool. Bot. Ver. Wien., Vol. V., p. 217 111a. (1855) (Beirut).

112.

Metasia ochrifascialis, Christoph, Hor. Soc. Entom. Ross., Vol. XVII, p. 121, No. 11 (1883) (Ordubat).

Metasia ossealis, Staudinger, Hor. Soc. Entom. Ross., Vol. XV., p. 182

(1880) (Asia Minor).

113. Phalæna aurata, Scopoli, Entom. Carn., p. 227, No. 565 (1763) (Carnio-114. Pyralis cespitalis, Schiffermüller and Denis, Ankünd, Syst. Werk. Schmett.

Wier. Geg., p. 123, No. 32 (1775) (Vienna). 115. Anthophilodes baphialis, Staudinger, Hor. Soc. Entom Ross., Vol. VII.,

p. 183, No. 503, pl. II., f. 7 (1870) (Astrochan). 116. Tegostoma paralis, Hampson, Trans. Entom. Soc., Lond., 1900, p. 399, No. 3a (Namangan).

117. Pyralis floralis, Hübner, Samml. Europ. Schmett., f. 142 (1800) (Europe). The numbers left out of the list of first quotations are those of species and

sub-species described as new in the body of the paper.

I have enumerated 133 species and sub-species in my section consisting of 64 Noctuidæ, 2 Lemoniidæ and 67 Pyralidæ. There are 4 Noctuidæ, 1 Lemoniidæ and 11 Pyralidæ described here for the first time, making 16 new species and subspecies.